

NEW INSIGHTS ABOUT THE ANATOMY OF THE HAND OF *CARNOTAURUS SASTREI* (THEROPODA: ABELISAUROIDAE)

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The abelisaurid theropod *Carnotaurus sastrei*, from the Late Cretaceous of Argentina, is characterized for the unusual presence of frontal horns and extremely abbreviated forelimbs, among other curious features. In particular, the four digit hand of *Carnotaurus* shows highly derived features, as recognized in previous works on this animal. However, reexamination of the hands of the holotype -and only available- specimen of *Carnotaurus sastrei*, reveals interesting details that modify previous interpretations about its manual anatomy. For example, proximal phalanges of digits II and III are longer than their respective metacarpals, an unusual condition absent in other theropods, including abelisaurids (e.g., *Aucasaurus*). Bizarre features of *Carnotaurus* are mainly concentrated on metacarpal IV. This constitutes the largest bone of the hand. Moreover, metacarpal IV of *Carnotaurus* is conical-shaped, with a wide and gently concave proximal articular surface for the ulna, and an acute distal tip lacking of an articular surface for a phalanx. Notably, the aspect of metacarpal IV resembles that of an ungual phalanx. The robust condition of metacarpal IV of *Carnotaurus* is in sharp contrast with the splint-like condition present in basal theropods. Metacarpal IV is proportionally shorter in other abelisaurids (*Aucasaurus* and *Majungasaurus*) for which this bone is known. However, in both *Carnotaurus* and *Aucasaurus* metacarpal IV has a conical shape and no phalanges of digit IV are present, in contrast with *Majungasaurus* in which a phalanx fused with metacarpal IV has been reported. This information is congruent with recent information supporting closer relationships between *Carnotaurus* and *Aucasaurus* with respect to the Malagasy taxon. Differences noted above for these three genera suggest a certain degree of manual morphological diversity among abelisaurids.